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| 09/707,417      | 11/06/2000  | Vance C. Bjorn       | 003022.P019X        | 9958             |

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EXAMINER

MOORTHY, ARAVIND K

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2131

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DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/707,417

Applicant(s)

BJORN, VANCE C.

Examiner

Aravind K Moorthy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-31 are pending in the application.
2. Claims 1-31 have been rejected.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 5, 6, 8, 9, 11-14, 17, 23, 24, 26, 27 and 29-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Ganesan U.S. Patent No. 5,748,735.**

As to claims 1, 14 and 17, Ganesan discloses receiving a record ID for a user [column 8, lines 14-38]. Ganesan discloses a one-time key generated by the server and encrypted with a user's public key by the server [column 9 line 61 to column 10 line 10]]. Ganesan discloses receiving the user's authentication data from the client [column 8, lines 14-38]. Ganesan discloses determining if the user's authentication data matches the record ID [column 8, lines 14-38]. Ganesan discloses decrypting the one-time key with the user's private key, and returning the decrypted one-time key to the client [column 10, lines 11-28].

As to claims 5 and 23, Ganesan suggests a web page presented by the server to the client prompts the user to enter the authentication data to log in to the server [column 8, lines 14-38].

As to claims 6 and 24, Ganesan discloses that the client's authentication data is automatically redirected to the authentication server [column 8, lines 14-38].

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As to claims 8 and 26, Ganesan discloses that the authentication data is personal data selected from among the following: a password, a smart card, and another type of authentication card [column 12, lines 32-29].

As to claims 9 and 27, Ganesan discloses that the client forwards the decrypted one-time key to the server, thereby authenticating the user as the owner of the private key [column 10, lines 50-56].

As to claims 11 and 29, Ganesan discloses that the record ID and the encrypted one-time key are further encrypted using a partner key [column 10, lines 43-49]. Ganesan discloses decrypting the record ID and encrypted one-time key using the partner key [column 10, lines 57-63].

As to claims 12 and 30, Ganesan discloses that the partner key is a symmetric key set up during registration of the partner [column 10, lines 43-49].

As to claims 13 and 31, Ganesan discloses that the partner key is a private key of the authentication server [column 10, lines 43-49].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**4. Claims 2-4 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesan U.S. Patent No. 5,748,735 as applied to claim 1 above, and further in view of Smith et al U.S. Patent No. 6,233,685 B1.**

As to claims 2 and 20, Ganesan teaches receiving a registration authentication data from the user, as discussed above.

Ganesan does not teach generating a random public key/private key pair for the user. Ganesan does not teach generating a random record ID for the user. Ganesan does not teach associating the authentication data and the private key with the record ID.

Smith et al teaches generating a random public key/private key pair for the user [column 5, lines 34-46]. Smith et al teaches generating a random record ID for the user. Smith et al teaches associating the authentication data and the private key with the record ID [column 8 line 66 to column 9 line 19].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan so that the user's public/private key pair would have been generated randomly by the server. The server would have generated a record ID for the user randomly. The authentication data and the private key would have been associated with the record ID.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan by the teaching of Smith et al because it minimizes risk of compromised factory machines, activating tamper response at a point of trust (certifying authority) to protect against attacks, and/or continually certifying the untampered state of the device along shipping channels and at user sites, and/or allowing for all keys to be regenerated so that in accordance with sound cryptographic practice there is no need to depend on permanent keys [column 2, lines 45-56].

As to claims 3 and 21, Ganesan teaches sending the record ID and the public key to the user [column 11, lines 28-35].

As to claims 4 and 22, Ganesan teaches establishing a secure connection with the user, prior to receiving registration authentication data [column 8 lines 14-38].

**5. Claims 7, 10, 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesan U.S. Patent No. 5,748,735 as applied to claim 1 above, and further in view of Byford U.S. Patent No. 6,581,161 B1.**

As to claims 7, 10, 25 and 18, Ganesan does not teach that the authentication data is biometric data. Ganesan does not teach discarding the record ID after returning the one-time key to the user.

Byford teaches authentication data being biometric data [column 4 lines 44-58]. Byford teaches discarding a user's record ID [column 2, lines 39-42].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan so that the authentication data was biometric data and the user's record ID would have been discarded.

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It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan by the teaching of Smith et al because it removes the need for encoded badges, static passwords and the like, and also removes the need for users to present themselves at a particular location, such as a security control office, before they can be granted access rights to a facility [column 4, lines 59-67].

**6. Claims 15, 16, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesan U.S. Patent No. 5,748,735 as applied to claims 14 and 17 above, and further in view of Towers et al U.S. Patent No. 5,692,106.**

As to claims 15, 16 and 18, Ganesan does not teach determining an authentication policy associated with the user. Ganesan does not teach verifying that the authentication policy has been satisfied, prior to permitting access to the server. Ganesan does not teach determining if the server should verify additional data. Ganesan does not teach requesting additional data from the user prior to generating the onetime key.

Towers et al teaches determining an authentication policy associated with the user [column 13, lines 31-48]. Towers et al teaches verifying that the authentication policy has been satisfied, prior to permitting access to the server [column 13, lines 31-48]. Towers et al teaches determining if the server should verify additional data [column 1, lines 36-63]. Towers et al teaches requesting additional data from the user prior to generating the one-time key [column 1, lines 36-63].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan so that an authentication policy

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associated with the user was verified prior to permitting access to the server. Should additional user information was needed; it would have been requested prior to generating the one-time key.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan by the teaching of Smith et al because the examiner asserts that authentication policies restrict what a user can do on a server site and requesting additional data further authenticates a user prior to accessing a server's site.

As to claim 21, Ganesan teaches that the interface sends the record ID and the public key to the user, as discussed above.

**7. Claims 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesan U.S. Patent No. 5,748,735 as applied to claim 17 above, and further in view of Mao U.S. Patent No. 6,119,227.**

As to claim 19, Ganesan does not teach nonce generation logic to generate a nonce. Ganesan does not teach that the nonce is to be included with the user authentication data from the client. Ganesan does not teach comparison logic to verify that the user authentication data includes the appropriate nonce.

Mao teaches nonce generation logic to generate a nonce [column 5, lines 13-29]. Mao teaches that that the nonce is to be included with the user authentication data from the client [column 5, lines 30-51]. Mao teaches comparison logic to verify that the user authentication data includes the appropriate nonce [column 5, lines 30-51].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan so that there was nonce generation logic to generate a nonce. The nonce is would have been included with the user authentication data



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from the client. Comparison logic would have been used to verify that the user authentication data includes the appropriate nonce.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ganesan by the teaching of Mao because it provides a method for authenticating a user's requests and messages [column 1, lines 49-67]

As to claim 22, Ganesan teaches that interface establish a secure connection with the user, prior to receiving registration authentication data, as discussed above.

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*Conclusion*


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K Moorthy whose telephone number is 703-305-1373.

The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 703-305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-1373.

Aravind K Moorthy  
November 10, 2003

  
AYAZ SHEIKH  
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